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TRICHODON BOREALIS, N. SP.

R. S. WILLIAMS.

Dioicous, male plants 3 to 5 mm. high, bearing 1 to 3 brownish buds, growing in readily separating green tufts with mostly simple stems radiculose at base and up to 5 mm. high; stem leaves gradually larger upward, the upper about 2.5 mm. long, from an ovate, clasping base rather gradually narrowed to a spreading-flexuous, subulate, grooved point more or less rough on the back, the narrow leaf blade usually extending nearly to apex with borders flat and obtusely denticulate or crenate often to the enlarged base of leaf; costa percurrent or slightly excurrent, often faint at base, up to 40μ wide; leaf cells irregularly rectangular, the median about 6μ wide and 8 to 12μ long; inner perichaetial leaves about like upper stem leaves but with broader, more clasping base more abruptly narrowed to a spreading, rough point; seta brownish, flexuous, 5 to 7 mm. long; capsule oblong, nodding, not quite straight, about 1 mm. long without lid, the median exothecal cells about 16μ wide and up to twice longer; stomata few, in one row at base; annulus 40μ wide, of 3 rows of cells; peristome teeth reddish brown, finely papillose, at base only nearly smooth, divided into 2 forks to a little above the rim of capsule, the articulations distinct, 8 or 9 in number, somewhat close together below, gradually more distant upward; lid conical, its height not much exceeding its basal diameter, with border sinuous or somewhat notched; spores smooth, up to 12μ in diameter; calyptra about 1.25 mm. long, smooth at apex, the base not quite entire.

Collected near Dawson, Yukon Territory, July 9, 1899.

This moss was found, nearly concealed among various other species, on damp earth in a small ravine just back of Dawson. I obtained but a very small amount although spending some time in searching for more specimens. It differs at once from *Trichodon cylindricus* by its capsule only one-half as long in proportion to its width, by its much shorter lid and by the perichaetial leaves more entire. The plant seems to be much nearer *Trichodon oblongus* Lindb. found in Spitzbergen and Norway of which I have been unable to see specimens, but this latter species is described and figured by Roth in his Europ. Laubm. 1: 270. 1903, where the lid is shown to be relatively about twice higher than in the Yukon species, the peristome teeth have 4 or 5 articulations close to their base and they are described as being pale and nearly smooth, also the annulus is said to consist of 1 or 2 rows of cells and the spores to be 14 to 16μ in diameter. New York Botanical Garden.

PALUDELLA SQUARROSA IN VERMONT.

E. J. WINSLOW.

While collecting in a sphagnum bog in Brownington, Vermont, last July I came upon a moss of striking and unfamiliar appearance. Tho the moss seemed fairly abundant, it grew so mixed with the sphagnum and other mosses that I collected only a small amount.

Recently upon opening my mosses for examination this moss proves to be *Paludella squarrosa* (L.) Brid. of which I am unable to find any previous records for New England. I shall certainly get a larger quantity on my next visit.

Specimens have been submitted to Mr. Chamberlain who verifies the determination, and to Mr. Collins who sends the following record of its collection:

"I find I have no record of any station for *Paludella* in New England. The record that I had in mind proves to be a New York record. Other records are Greenland, Hudson's Bay, Mt. Albert and Grand River (Gaspé), Anticosta, Rocky Mts. of Canada, British Columbia, Saskatchewan, Alaska, and near Montreal, Canada."
Auburndale, Mass.

"THE LICHEN FLORA OF THE SANTA CRUZ PENINSULA." A REVIEW.

LINCOLN WARE RIDDLE.

The appearance, within a period of less than a month, of two extensive and important papers on lichens is a sufficiently remarkable experience in North American Lichenology to call for special notice. Prof. Bruce Fink's "Lichens of Minnesota," which appeared June 1, 1910, has already been reviewed in these pages.¹ And it now becomes the reviewer's privilege to call to the attention of the readers of THE BRYOLOGIST the work of Dr. A. C. Herre on "The Lichen Flora of the Santa Cruz Peninsula, California," published May 15, 1910.² It is of interest to compare these two papers in a general way. Each represents the intensive study of a restricted region: each author has published various preliminary studies,³ and in each case the present papers come as the culmination of prolonged work. Minnesota being the larger field offers 439 species and varieties, but the richness of the Californian flora results in the description of 309 species and varieties from the smaller area.

Dr. Herre's paper should be of special interest to American students as being the first important paper to embody consistently Dr. Zahlbruckner's ideas of classification and nomenclature as presented in his treatment of the lichens in Engler and Prantl.⁴ After the long established authority of Tuckerman's "Synopsis of the North American Lichens" to which we are accustomed this can not but seem radical. Yet it is undoubtedly the nearest approach that we yet have to a classification upon which the majority of

1. BRYOLOGIST 13: Nov. 1910.

2. Herre, A. W. C. T. The Lichen Flora of the Santa Cruz Peninsula, California. Proc. Washington Acad. Sci. 12: 27-269. 1910.

3. Herre, A. W. C. T. The Folioseous and Fruticose Lichens of the Santa Cruz Peninsula, California. Proc. Wash. Acad. Sci. 7: 325-396. 1906. Lichen Distribution in the Santa Cruz Peninsula, California. Botanical Gazette 43: 267-273. 1907.

4. Engler and Prantl Die Natürlichen Pflanzenfamilien. Teil I. Abteilung No. 1.